REMARKS:

35 USC 112 objections.

Applicant thanks the Examiner for these careful and detailed comments. Amendments now made deal with all of them In addition the word pivotably has been changed to pivotally.

35 USC 102

The rejection based on earlier references is respectfully traversed.

The following remarks are copied from Applicant response filed in the PCT application. It is believed that they are applicable here since the same references are cited.

These remarks are also applicable to 4,261,596.

The main purpose of the invention is to provide a wheelbarrow which better facilitates the transfer of a load of material from the ground to the wheelbarrow.

The wheelbarrow is designed in such a manner so as to function effectively both as a shovel to dig into a load of material on the ground and to transfer the load onto the body portion for the user to carry. This is facilitated by;

1. A body portion (12) in the shape of a sloping shovel supported by a pair of fulcrum leg members(36) connected to the sides of the body portion (Figures 1 and 2);

2. Fulcrum leg members having a free end (38) which is configured in such a manner that the free end engages the ground when in operation and provides support to the body portion while shovelling and lifting the load off the ground (Figure 3).

3. A pair of first link members (42) attached to fulcrum leg members connect to each side of the body portion at the rear end;

4.The link members support the fulcrum leg members to move from a retracted position when the fulcrum leg members are clearing the ground, to engage the ground when in operation of shovelling the load off the ground. Thus, when force is applied to the handles to enable the body portion to shovel up the load, the fulcrum leg members dig into the ground and assist in loading the material onto the body portion. The free end of the fulcrum leg members allows the body portion to get a foothold on the ground and apply force to lift the load onto the body portion.

Also, the body portion(12) is strategically placed between two wheels (14) for better balance of the load on the wheelbarrow as opposed to the one in D1(UK 2289024) where the wheelbarrow's sub frame is placed on top of a single wheel.
When the wheelbarrow in D1 is in motion, the load in the sub frame is placed on

top of the rotating wheel. This can cause the wheelbarrow to be off balanced and the load to spill in event of any rough ground surface beneath the wheel.

Whereas, in the wheelbarrow in claim 1 of the present application, since the body portion(12) is nestled in between the wheels, the load is well balanced and the two wheels move in synchronisation with each other thereby negating the affect of any rough surface beneath.

The placing of handles (16) in claim 1 besides the body portion and in between the body portion and the wheels is with the object of facilitating easy movement of the heavy load on the wheelbarrow with the minimum of stress on the user's arm. The handles in D1 are placed on top of the sub frame which carries the load. So when the wheelbarrow in D1 is loaded, and the user is pushing the wheelbarrow with the handles, the arm elbows of the user point outwards and due to the heavy load, tire quickly. More strength is also required to push the wheelbarrow in D1 due to the placing of the handles on top of the load.

At the same time, the handles (16) in claim 1 are placed between the body portion carrying the load and the wheels. This facilitates the carriage of load with the minimum of effort and pressure on the user's arm and especially the elbows which point inwards or are in a straighter position.

The International Searching Authority in the written opinion has raised objection to claims 1 and 9 based on the prior patents - GB 2289024 A and US 1804403

described as D1 and D2 respectively. There is no objection to the rest of the claims.

The Applicant has amended claim 1 and has also incorporated some of the features of claim 2 in claim 1. Claim 9 has been cancelled.

The prior art cited in the written opinion is crude. The wheelbarrow of the present Applicant is a different and improved one, made with the object of better facilitating the shovelling and loading of material off the ground.

The load carrying body of the wheelbarrow in D1(GB 2289024 A) is rendered inefficient and falls short of the intended object of carrying the full load off the ground due to the placing of the wheel underneath the body portion. The wheel underneath the body portion does not allow free movement of the body portion while digging into the load on the ground.

Further, the extension 17 is incapable of providing support to the body portion while it is shovelling the load off the ground. The user has to place a foot on the extension 17 to

prevent the wheel from coming into motion. The extension 17 thus is not in a fixed position and cannot effectively engage the ground when the body portion is loading

the material off the ground as is clear from Figure 3C. Figure 3C of D1 discloses the position and the stage of loading the material off the ground and at that point, the user's foot is off the extension. The extension 17 at the relevant point cannot be supported manually by the user. Also, the user has to crouch downwards while loading the material off the ground. This causes great inconvenience to the user and results in exertion.

Also as shown in Figure 3D, the user has to again place the foot on the other end of the extension in order to assist the load off the ground. This is a very inefficient and cumbersome procedure of lifting load from the ground. This leads to imbalance of the user and also causes the load to spill on the ground. The entire process of loading the material onto the wheelbarrow is outdated. It requires manual help if the task is to be done completely and satisfactorily. That in turn frustrates the very purpose of a wheelbarrow.

The wheelbarrow in D1 is thus handicapped by the absence of a fulcrum leg member which can engage the ground while the wheelbarrow is in the process of shovelling and lifting the load off the ground. There is no support to the body portion when the body portion digs into the load on the ground as is clear from Figure 3C. The extension 17 cannot assist in levering up a load of material and is rendered useless. The extension 17 is not a substitute for fulcrum leg members in the Applicant's wheelbarrow with a free end configured in such a manner that it

engages the ground when in operation and provides support to the force being applied to the body portion by pushing at the handles.

Also as illustrated earlier, the placing of handles and the wheel in D1 is inappropriate and hinders the functioning of the wheelbarrow.

The wheelbarrow cited in US 1804403 described as D2 is also not designed in a manner to facilitate shovelling and picking up load off the ground.

When the wheelbarrow is in the retracted position as shown in Figure 1, the wheelbarrow rests on the front wheel 15 as well as on the rear support members 18. The rear support members do not perform the function of fulcrum leg members as in the Applicant's wheelbarrow with a free end that engages the ground when the wheelbarrow is in operation.

As indicated in lines 80-85 of column 2 of page 2, the operator has to take hold of the frame at the members 18 and has to crouch in a very low position to be able to run the wheelbarrow along the ground. This is a very inconvenient method of operating a wheelbarrow and causes exertion which affects productivity.

As also indicated in lines 87-100 of column 2 of page 2, the operator has to place a foot on the wheel 15, hold on to the members 18 and push the frame back into normal

position. Still keeping a foot on the wheel, the operator has to exert force to push

the body forward into the pile. Thus, the entire process depends on the synchronisation of the foot and exerting force at the right time.

Another relevant fact is that as mentioned in lines 103-108 of column 2 of page 2, the process of shovelling and loading material with the use of the wheelbarrow D2 involves more than one person. It is stated in the lines:

> By this invention the largest size of body can be loaded with the heaviest and most reluctant material, if a man is placed at the pile to move material into the body with a shovel during digging.

Thus, as per the own claim of the inventor, the wheelbarrow cannot be efficiently operated by a single person and requires another person to lift the material off the ground into the body of the wheelbarrow using a shovel.

The wheelbarrow as shown in D2 puts even greater pressure on the user as the wheels and the handles in D2 are placed beneath the body (12). The user therefore has to bend a lot while pushing the wheelbarrow and this creates pressure on the user's backbone. Further, with the load in the body of the wheelbarrow, the user has to always keep the body parallel to the ground to avoid spilling the load. The user therefore has to perform two difficult functions simultaneously- pushing the wheelbarrow in a bend position and ensuring the body does not tilt downwards.

On the other hand, the wheelbarrow of the Applicant performs the dual function of shovelling the material off the ground with the assistance of fulcrum leg members and the free end of the fulcrum leg members engaged with the ground and transferring the material onto the body portion without any external help.

When the body portion(12) acting as a shovel digs into the material, it is secured by the free end of fulcrum leg members to enable the operator to exert force by simply pushing the handles. The operator has neither to bend down to shovel the load off the ground, nor the operator has to exert pressure by placing a foot on any extension as in D1 or on the wheel as in D2.

The wheelbarrow of the Applicant enables the operator to use the wheelbarrow for shovelling and lifting material off the ground while standing in an upright position and without having to exert himself.

The fulcrum mechanism of the wheelbarrow is not dependant on the operator having to exert pressure by placing a foot or by bending down to run the wheelbarrow along the ground.

The wheelbarrows in both D1 and D2 and of 4261596 do not disclose the following features of the Applicant's wheelbarrow :

1. A body portion (12) in the shape of a sloping shovel supported by a pair of fulcrum leg members(36) connected to the sides of the body portion (Figures 1 and 2);

2. Fulcrum leg members having a free end (38) which is configured in such a manner that the free end engages the ground when in operation and provides support to the body portion while shovelling and lifting the load off the ground (Figure 3).

3. A pair of first link members (42) attached to fulcrum leg members connect to each side of the body portion at the rear end;

4.The link members support the fulcrum leg members to move from a retracted position when the fulcrum leg members are clearing the ground, to engage the ground when in operation of shovelling the load off the ground. Thus, when force is applied to the handles to enable the body portion to shovel up the load, the fulcrum leg members dig into the ground and assist in loading the material onto the body portion. The free end of the fulcrum leg members allows the body portion to get a foothold on the ground and apply force to lift the load

onto the body portion.

It these believed that these features of the Applicant's wheelbarrow are novel and are patentable.

The claims as now revised claim features of claim 2. This was stated to be allowable in the office action.

It is believed on this basis that the claims are now allowable.

Reconsideration and allowance is earnestly solicited in view of the foregoing. In the event that the Examiner feels that a discussion of the case would be helpful it is respectfully requested that he call the undersigned at the telephone number noted below. It is helpful if the Examiner can quote the attorney docket number and applicant's name.

Yours respectfully,

Claudio D Carosi et Al Attorney Docket Number1166U101

Per: _____

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